

Chapter 5

Credit risk mitigation

5.6 Master netting agreements

Eligibility

5.6.1

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- (1) For a *firm* adopting the *financial collateral comprehensive method*, the effects of bilateral netting contracts covering *repurchase transactions, securities or commodities lending or borrowing transactions*, and/or other *capital market-driven transactions* with a counterparty may be recognised.
- (2) Without prejudice to ■ BIPRU 14 to be recognised the collateral taken and *securities or commodities* borrowed within such agreements must comply with the eligibility requirements for collateral set out at ■ BIPRU 5.4.2 R to ■ BIPRU 5.4.8 R.

[Note: BCD Annex VIII Part 1 point 5]

Minimum requirements

5.6.2

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For master netting agreements covering *repurchase transactions* and/or *securities or commodities lending or borrowing transactions* and/or other *capital market-driven transactions* to be recognised for the purposes of ■ BIPRU 5, they must:

- (1) be legally effective and enforceable in all relevant jurisdictions, including in the event of the bankruptcy or insolvency of the counterparty;
- (2) give the non-defaulting party the right to terminate and close-out in a timely manner all transactions under the agreement upon the event of default, including in the event of the bankruptcy or insolvency of the counterparty; and
- (3) provide for the netting of gains and losses on transactions closed out under a master agreement so that a single net amount is owed by one party to the other.

[Note: BCD Annex VIII Part 2 point 4]

5.6.3

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In addition the minimum requirements for the recognition of financial collateral under the *financial collateral comprehensive method* set out in ■ BIPRU 5.4.9 R must be fulfilled.

[Note: BCD Annex VIII Part 2 point 5]

Calculation of the fully adjusted exposure value: the supervisory volatility adjustments approach and the own estimates of volatility adjustments approach

- 5.6.4** **R** ■ BIPRU 5.6.5 R to ■ BIPRU 5.6.11 R set out the calculation of the fully adjusted exposure value under the *supervisory volatility adjustments approach* and the *own estimates of volatility adjustments approach*.
- 5.6.5** **R** In calculating the 'fully adjusted exposure value' (E^*) for the exposures subject to an eligible master netting agreement covering *repurchase transactions* and/or *securities or commodities lending or borrowing transactions* and/or other *capital market-driven transactions*, a firm must calculate the volatility adjustments to be applied in the manner set out in ■ BIPRU 5.6.6 R to ■ BIPRU 5.6.11 R either using the *supervisory volatility adjustments approach* or the *own estimates of volatility adjustments approach* as set out in ■ BIPRU 5.4.30 R to ■ BIPRU 5.4.65 R for the *financial collateral comprehensive method*. For the use of the *own estimates of volatility adjustments approach* the same conditions and requirements apply as under the *financial collateral comprehensive method*.
- [Note: BCD Annex VIII Part 3 point 5]
- 5.6.6** **R** A firm must calculate the net position in each type of *security* or *commodity* by subtracting from the total value of the *securities* or *commodities* of that type lent, sold or provided under the master netting agreement, the total value of *securities* or *commodities* of that type borrowed, purchased or received under the agreement.
- [Note: BCD Annex VIII Part 3 point 6]
- 5.6.7** **R** For the purposes of ■ BIPRU 5.6.6 R, type of *security* means *securities* which are issued by the same entity, have the same issue date, the same maturity and are subject to the same terms and conditions and are subject to the same liquidation periods as indicated in ■ BIPRU 5.4.30 R to ■ BIPRU 5.4.65 R.
- [Note: BCD Annex VIII Part 3 point 7]
- 5.6.8** **R** A firm must calculate the net position in each currency other than the settlement currency of the master netting agreement by subtracting from the total value of *securities* denominated in that currency lent, sold or provided under the master netting agreement added to the amount of cash in that currency lent or transferred under the agreement, the total value of *securities* denominated in that currency borrowed, purchased or received under the agreement added to the amount of cash in that currency borrowed or received under the agreement.
- [Note: BCD Annex VIII Part 3 point 8]
- 5.6.9** **R** A firm must apply the volatility adjustment appropriate to a given type of *security* or cash position to the absolute value of the positive or negative net position in the *securities* of that type.
- [Note: BCD Annex VIII Part 3 point 9]

5.6.10 **R** A firm must apply the foreign exchange risk (fx) volatility adjustment to the net positive or negative position in each currency other than the settlement currency of the master netting agreement.

[Note: BCD Annex VIII Part 3 point 10]

5.6.11 **R** E^* must be calculated according to the following formula:

$$E^* = \max \{0, [(\Sigma(E) - \Sigma(C)) + \Sigma(|\text{net position in each security}| \times H_{\text{sec}}) + (\Sigma|E_{\text{fx}}| \times H_{\text{fx}})]\}$$

where:

- (1) (where *risk weighted exposure amounts* are calculated under the *standardised approach*) E is the *exposure* value for each separate *exposure* under the agreement that would apply in the absence of the credit protection;
- (2) C is the value of the *securities* or *commodities* borrowed, purchased or received or the cash borrowed or received in respect of each such *exposure*;
- (3) $\Sigma(E)$ is the sum of all Es under the agreement;
- (4) $\Sigma(C)$ is the sum of all Cs under the agreement;
- (5) E_{fx} is the net position (positive or negative) in a given currency other than the settlement currency of the agreement as calculated under **BIPRU 5.6.8 R**;
- (6) H_{sec} is the volatility adjustment appropriate to a particular type of *security*;
- (7) H_{fx} is the foreign exchange volatility adjustment; and
- (8) E^* is the fully adjusted *exposure* value.

[Note: BCD Annex VIII Part 3 point 11]

Calculation of the fully adjusted exposure value: the master netting agreement internal models approach

5.6.12 **R** **BIPRU 5.6.16 R** to **BIPRU 5.6.28 G** apply to a firm that has a *master netting agreement internal models approach permission* and set out the calculation of the effects of *credit risk mitigation* under the *master netting agreement internal models approach*.

5.6.13 **G** A firm that wishes to use the *master netting agreement internal models approach* will need to apply to the *appropriate regulator* for a *master netting agreement internal models approach permission*. **BIPRU 1.3** sets out the requirements and procedures relating to those applications.

5.6.14 **G** A *master netting agreement internal models approach permission* will amend, to the extent set out in the *master netting agreement internal models approach permission*, **BIPRU 5.6.1 R** so as to provide that, with the exceptions provided in **BIPRU 5.6**, a firm must use the *master netting*

agreement internal models approach for the purposes of the calculations specified in ■ BIPRU 5.6.

- 5.6.15** **G** A firm which has been granted a *VaR model waiver* will still need to make an application to the *appropriate regulator* for a *master netting agreement internal models approach permission*. However, the application should generally be straightforward as a firm which is able to satisfy the requirements for a *VaR model waiver* should usually also be able to satisfy the requirements for a *master netting agreement internal models approach permission*.
- [Note: BCD Annex VIII Part 3 point 14]
- 5.6.16** **R** The *master netting agreement internal models approach* is an alternative to using the *supervisory volatility adjustments approach* or the *own estimates of volatility adjustments approach* in calculating volatility adjustments for the purpose of calculating the 'fully adjusted exposure value' (E*) resulting from the application of an eligible master netting agreement covering *repurchase transactions, securities or commodities lending or borrowing transactions* and/or other *capital market-driven transactions* other than derivative transactions. The *master netting agreement internal models approach* takes into account correlation effects between security positions subject to a master netting agreement as well as the liquidity of the instruments concerned. The internal model used for the *master netting agreement internal models approach* must provide estimates of the potential change in value of the unsecured *exposure amount* ($\Sigma E - \Sigma C$).
- [Note: BCD Annex VIII Part 3 point 12 (part)]
- 5.6.17** **R** A firm may also use the internal model used for the *master netting agreement internal models approach* for *margin lending transactions* if the transactions are covered under the *firm's master netting agreement internal models approach permission* and the transactions are covered by a bilateral master netting agreement that meets the requirements set out in ■ BIPRU 13.7.
- [Note: BCD Annex VIII Part 3 point 12 (part)]
- 5.6.18** **R** A firm may use the *master netting agreement internal models approach* independently of the choice it has made between the *standardised approach* and the *IRB approach* for the calculation of *risk weighted exposure amounts*. However, if a firm uses the *master netting agreement internal models approach*, it must do so for all counterparties and *securities*, excluding immaterial portfolios where it may use the *supervisory volatility adjustments approach* or the *own estimates of volatility adjustments approach* as set out in ■ BIPRU 5.4.30 R to ■ BIPRU 5.4.65 R.
- [Note: BCD Annex VIII Part 3 point 13]
- 5.6.19** **R** (1) A firm must be able to satisfy the *appropriate regulator* that the *firm's risk management system* for managing the risks arising on the transactions covered by the master netting agreement is conceptually sound and implemented with integrity and that, in particular, the minimum qualitative standards in (2) – (11) are met.

- (2) The internal risk-measurement model used for calculation of potential price volatility for the transactions is closely integrated into the daily risk-management process of the *firm* and serves as the basis for reporting risk *exposures* to senior management of the *firm*.
- (3) The *firm* has a risk control unit that is independent from business trading units and reports directly to senior management. The unit must be responsible for designing and implementing the *firm's* risk-management system. It must produce and analyse daily reports on the output of the risk-measurement model and on the appropriate measures to be taken in terms of position limits.
- (4) The daily reports produced by the risk-control unit are reviewed by a level of management with sufficient authority to enforce reductions of positions taken and of overall risk *exposure*.
- (5) The *firm* has sufficient staff skilled in the use of sophisticated models in the risk control unit.
- (6) The *firm* has established procedures for monitoring and ensuring compliance with a documented set of internal policies and controls concerning the overall operation of the risk-measurement system.
- (7) The *firm's* models have a proven track record of reasonable accuracy in measuring risks demonstrated through the back-testing of its output using at least one year of data.
- (8) The *firm* frequently conducts a rigorous programme of stress testing and the results of these tests are reviewed by senior management and reflected in the policies and limits it sets.
- (9) The *firm* must conduct, as part of its regular internal auditing process, an independent review of its risk-measurement system. This review must include both the activities of the business trading units and of the independent risk-control unit.
- (10) At least once a year, the *firm* must conduct a review of its risk management system.
- (11) The internal model used for the *master netting agreement internal models approach* must meet the requirements set out in ■ BIPRU 13.6.65 R to ■ BIPRU 13.6.67 R.
[Note: BCD Annex VIII Part 3 point 16]

5.6.19A

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This paragraph provides *guidance* in relation to ■ BIPRU 5.6.19R (8). In carrying out the stress testing programme, a *firm* should evaluate the simultaneous impact of individual stress scenarios on its *counterparty exposures*, its *positions* and the aggregate amount of margin calls that it would receive. A *firm's* stress scenarios should take into account the possibility that the liquidation period may be substantially longer than 5 days for *repurchase transactions* and securities lending or borrowing transactions, and 10 days for other types of *securities financing transactions*.

5.6.20

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The calculation of the potential change in value must be subject to the following minimum standards:

- (1) at least daily calculation of the potential change in value;
- (2) a 99th percentile, one-tailed confidence interval;
- (3) a 5-day equivalent liquidation period, except in the case of transactions other than securities *repurchase transaction* or securities *lending or borrowing transactions* where a 10-day equivalent liquidation period should be used;
- (4) an effective historical observation period of at least one year except where a shorter observation period is justified by a significant upsurge in price volatility; and
- (5) three-monthly data set updates.

[Note: BCD Annex VIII Part 3 point 17]

- 5.6.21** **R** The internal risk-measurement model must capture a sufficient number of risk factors in order to capture all material price risks.
[Note: BCD Annex VIII Part 3 point 18]
- 5.6.22** **R** A firm may use empirical correlations within risk categories and across risk categories provided that it is able to satisfy the *appropriate regulator* that the firm's system for measuring correlations is sound and implemented with integrity.
[Note: BCD Annex VIII Part 3 point 19]
- 5.6.23** **G** The *appropriate regulator* will not grant a *master netting agreement internal models approach permission* if it is not satisfied that the standards in ■ BIPRU 5.6.19 R to ■ BIPRU 5.6.22 R are met.
- 5.6.24** **R** The fully adjusted *exposure value* (E^*) for a firm using the *master netting agreement internal models approach* must be calculated according to the following formula:

$$E^* = \max \{0, [(\sum E - \sum C) + (VaR \text{ output of the internal models})]\}$$
where
- (1) (where *risk weighted exposure amounts* are calculated under the *standardised approach*) E is the *exposure value* for each separate *exposure* under the agreement that would apply in the absence of the credit protection;
 - (2) C is the value of the *securities* borrowed, purchased or received or the cash borrowed or received in respect of each such *exposure*;
 - (3) $\sum (E)$ is the sum of all Es under the agreement; and
 - (4) $\sum (C)$ is the sum of all Cs under the agreement.
- [Note: BCD Annex VIII Part 3 point 20]

5.6.25 **R** In calculating *risk weighted exposure amounts* using the *master netting agreement internal models approach*, a *firm* must use the previous *business day's* model output.

[Note: BCD Annex VIII Part 3 point 21]

5.6.26 **G** No changes should be made to the internal model used for the *master netting agreement internal models approach* unless the change is not material. Material changes to such a model will require a variation of the *master netting agreement internal models approach permission*. Materiality is measured against the model as it was at the time that the *master netting agreement internal models approach permission* was originally granted or, any later date set out in the *master netting agreement internal models approach permission* for this purpose. If a *firm* is considering making material changes to such a model then it should notify the *appropriate regulator* at once.

5.6.27 **G** If a *firm* ceases to meet the requirements of **■ BIPRU 5** in relation to the *master netting agreement internal models approach*, the *firm* should notify the *appropriate regulator* at once.

5.6.28 **G** The *appropriate regulator* is likely to revoke a *master netting agreement internal models approach permission* if a *firm* ceases to meet the requirements of **■ BIPRU 5** in relation to the *master netting agreement internal models approach*.

Calculation of risk weighted exposure amounts under the standardised approach

- 5.6.29** **R**
- (1) A *firm* must under the *standardised approach* calculate *risk weighted exposure amounts* for *repurchase transactions* and/or *securities or commodities lending or borrowing transactions* and/or other *capital market-driven transactions* covered by master netting agreements under this rule.
 - (2) E^* as calculated under **■ BIPRU 5.6.5 R** to **■ BIPRU 5.6.25 R** must be taken as the *exposure* value of the *exposure* to the counterparty arising from the transactions subject to the master netting agreement for the purposes of **■ BIPRU 3.2.20 R** to **■ BIPRU 3.2.26 R**.

[Note: BCD Annex VIII Part 3 point 22]